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Evidence from IRCA**

Alessandra Casarico  
Giovanni Facchini  
Tommaso Frattini

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**Alessandra Casarico**

*Università Bocconi, CES-Ifo and LdA*

**Giovanni Facchini**

*University of Nottingham, Università degli Studi di Milano,  
CEPR, CES-Ifo, CReAM, IZA and LdA*

**Tommaso Frattini**

*Università degli Studi di Milano,  
CReAM, IZA, and LdA*

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IZA

P.O. Box 7240  
53072 Bonn  
Germany

Phone: +49-228-3894-0  
Fax: +49-228-3894-180  
E-mail: [iza@iza.org](mailto:iza@iza.org)

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## ABSTRACT

### What Drives the Legalization of Immigrants? Evidence from IRCA\*

We develop a model to understand the trade-offs faced by an elected representative in supporting an amnesty when a restrictive immigration policy is in place. We show that an amnesty is more desirable the more restricted are the occupational opportunities of undocumented immigrants and the less redistributive is the welfare state. Empirical evidence based on the voting behavior of U.S. Congressmen on the Immigration Reform and Control Act of 1986 provides strong support for the predictions of our theoretical model.

JEL Classification: F22, O51

Keywords: migration policy, amnesties, democracy, roll call votes

Corresponding author:

Giovanni Facchini  
School of Economics  
University of Nottingham  
University Park  
Nottingham NG7 2RD  
United Kingdom  
E-mail: [giovanni.facchini@nottingham.ac.uk](mailto:giovanni.facchini@nottingham.ac.uk)

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*“The 855-page Senate bill... contains a path to citizenship. Proponents avoid calling it amnesty, even as they tout the moral imperative of bringing 11 million people out of the shadows. Opponents wield the word as a weapon, decrying amnesty as a free pass to lawbreakers...”* Cindy Chang (2013) <sup>1</sup>

## 1 Introduction

Growing migration pressures in the presence of restrictive immigration policies have made illegal immigration widespread, and most rich destination countries harbor today large populations of undocumented foreigners.<sup>2</sup> Among host countries, the U.S. stands out as one the largest recipients of illegal immigrants (Dustmann and Frattini 2013), and recent estimates suggest that in 2012, 11 million individuals, or 3.5% of the total population, was made up by irregular migrants. The legal status of migrants clearly reflects the policy stance of the destination country, both in terms of the ex-ante controls introduced to discipline the flows, and the ex-post measures taken to grant legal status. In particular, amnesties have been the focus of much attention, and much controversy.

The purpose of this paper is to study the tradeoffs faced by a welfare minded politician in the decision to support the introduction of an immigration amnesty. To address this question, we develop a model in which immigration policy involves a minimum skill requirement, which cannot be perfectly enforced,<sup>3</sup> leading to the possible presence of illegal immigrants. To establish whether an amnesty is desirable, our analysis focuses on a novel cost-benefit calculus, involving a potential welfare gain arising from the new labor market opportunities available to legalized migrants, and a potential loss resulting from them gaining access to the welfare state. More specifically, in our model the labor market is characterized by imperfect skill matching between employers and employees, and by the presence of a formal sector, where only legal migrants can find employment, and of an informal one, to which illegal immigrants are restricted. As a result, some illegal workers who could have taken up a qualified job in the formal sector, are prevented from doing so, leading to a potential output loss. The role of the welfare state is captured by a simple redistributive mechanism consisting of a proportional tax levied on the formal sector and of a lump-sum benefit paid to all natives and legal migrants, whereas illegal immigrants are instead excluded from it.

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<sup>1</sup>LA Times May 12, 2013, available at <http://articles.latimes.com/2013/may/12/local/la-me-amnesty-20130513>.

<sup>2</sup>Throughout the paper we will use “irregular”, “illegal” and “undocumented” immigrants as synonyms.

<sup>3</sup>This is of course only one of the many features of the migration policies in place in destination countries. We focus on it to simultaneously model the presence of legal and illegal immigrants. The same objective could be achieved by introducing a policy taking the form of a migration quota as in Facchini and Testa (2010). For a discussion see Section 2.

We show that the incentives to support an amnesty are stronger, the greater is the improvement in the labor market opportunities available to legalized workers as a result of them gaining access to the formal sector. At the same time, a more redistributive welfare state makes an amnesty less desirable, as low-skilled legalized foreign workers will gain access to benefits.

In the second part of the paper, we empirically assess the predictions of our model. To this end, we study the determinants of the voting behavior of U.S. Representatives on the Immigration Reform and Control Act (IRCA H.R. 3810) of 1986. Voting on IRCA is an ideal testing ground for our theory for two reasons. First, the enactment of this bill resulted in one of the largest legalization programs ever undertaken in the Western world: 2,8 million individuals – or 1.2 percent of the total population of the country – became entitled to permanent residency, with long lasting consequences for the U.S. economy and for the political debate around immigration reform. Second, the data at our disposal are unique as we can match the voting behavior of elected congressmen to a wealth of constituency level characteristics. This allows us to construct detailed measures of the labor market mismatch of illegal immigrants before the legalization took place – based on the degree of over-education of immigrants in each two digit occupation – and of the local fiscal exposure to immigration – based on the fact that some high immigration districts are characterized by high levels of local tax payments, while others are not. Our empirical analysis shows that the drivers identified in the theoretical framework play a key role. In particular, our preferred specification indicates that a 10 percentage points increase (about 60% of a standard deviation) in the labor market mismatch suffered by illegal immigrants is correlated with a 3.7 percentage points (or about 6.3% at the sample mean) increase in the probability of supporting IRCA. Furthermore, representatives of districts characterized by high local exposure to the fiscal effects of a legalization (7% of all districts) are 29 percentage points (58% at the sample mean) less likely to support it than representatives of districts characterized by a low fiscal exposure.

Besides the factors highlighted in our theoretical model, the existing literature has emphasized the role played by several drivers that might influence a representative’s voting behavior on immigration reform. Thus, to assess the robustness of our findings, we explore the role played by several additional individual-level and constituency level characteristics. While we find that several of these factors do matter, our main results are unaffected. The same holds true when we use alternative econometric specifications, and account for the possibility of sample selection. Our results confirm that the expected impact of labor market mismatch and of the generosity of the welfare state are robust drivers of support for IRCA.

This paper contributes to the small but growing literature on immigration amnesties. Chau (2001) shows that legalizing undocumented workers can be part of an optimal migration policy package – together with internal and border controls – when there is a time inconsistency problem because the government cannot commit to implement the ex-ante optimal frequency

of internal controls. Importantly, in her model all workers share the same skill level and all immigrants are ex-ante undocumented. They can become legal only as a result of an amnesty.

Karlson and Katz (2003) develop a model of illegal immigration focusing instead on the role of amnesties as a tool for governments to induce immigrants to self-select based on ability. In particular, they emphasize that a legalization will offer skilled workers better labor market opportunities. As a result, the latter might be enticed to migrate even as illegals, in the hope that an ex-post legalization will improve their income opportunities.<sup>4</sup> Differently from Chau (2001) and Karlson and Katz (2003), besides considering heterogeneous workers and firms, we allow for the co-existence of legal and illegal immigrants.<sup>5</sup>

Epstein and Weiss (2011) also study the desirability of legalization programs. In their setting, immigrants can only enter the country illegally, and can become legal as the result of an amnesty. Immigration is always costly from the destination country's point of view, and the cost depends only on the total number of immigrants, and not on their skill level. Moreover, migrants earn the same wages irrespective of their status. Empirical evidence has instead pointed out that the wages of legalized migrants do improve following an amnesty, and so do wage growth and return to skill (Borjas and Tienda 1993, Kossoudji and Cobb-Clark 2002, Kaushal 2006 and Amuedo-Dorantes, Bansak, and Raphael 2007). This is likely due to an increase in the geographical and occupational mobility of legalized migrants and in the quality of their job matches (Amuedo-Dorantes and Bansak 2011 and Steigleder and Sparber 2015). More generally, the skill level of the illegal migrant population is likely to be an important determinant of the welfare consequences of a legalization program, and modeling this lies at the center of our analysis.<sup>6</sup>

The remainder of the paper is organized as follows. Section 2 introduces the basic setup, whereas section 3 establishes the conditions for the desirability of an amnesty. Section 4 outlines the debate around the introduction of IRCA, and Section 5 describes the data we use. Section 6 develops our empirical analysis. Section 7 assesses the robustness of our results and section 8 concludes.

## 2 The model

To analyze the drivers of support for immigration amnesties, we consider a simple model with a polity featuring  $D$  districts/constituencies. In the representative district, domestic production factors and foreign workers are combined to produce a single good. They are assumed to be complements, and are both required for positive output levels to be generated. As a result, the

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<sup>4</sup>See Docquier and Rapoport (2012) for a recent survey on the economics of skilled migration.

<sup>5</sup>For a political economy model of immigration amnesties, see also Chau (2003).

<sup>6</sup>For a quantitative assessment of the effect of an amnesty in the United States, see Machado (2013).

presence of migrants in the labor market is necessarily beneficial, generating the “gains from migration” that have been emphasized in the literature (Berry and Soligo 1969, Borjas 1995).<sup>7</sup> Yet, the presence of a redistributive welfare state implies that these gains must be traded off against the welfare losses induced by the leakage of benefits to migrants (Razin, Sadka, and Swagel 2002, and Facchini, Razin, and Willmann 2004).

For simplicity, we will think of the domestic factor owners as entrepreneurs.<sup>8</sup> There are  $\mathcal{I}$  potentially active firms in the constituency, each one of them indexed by  $i$ , with  $i$  distributed according to the density function  $n(i)$  on the interval  $[0, 1]$ . Firms can be ranked according to their skill intensity and a higher value of  $i$  indicates a higher skill requirement, with 1 being the most skill-intensive firm. The mass of the domestic population is given by  $N$ , where  $\mathcal{I} \geq N$ .

Potential immigrants differ in their ability, and are indexed by  $j$ , with  $j$  distributed according to the density function  $m(j)$  on the interval  $[0, 1]$ , with 1 being the highest skill level. To capture in a simple fashion labor market imperfections, we use a random matching framework whereby individual abilities and a vacancy’s skill requirement are not necessarily perfectly combined and consequently some highly qualified workers might end up in low-skill jobs, some others may be unemployed, and/or some firms might not be able to find suitable members of staff. Formally, if a migrant is employed, a match of value  $v(i, j)$  is created and shared between natives and migrants, where

$$v(i, j) = \begin{cases} [1 - (j - i)]v(j) & \text{if } j \geq i \\ 0 & \text{if } j < i. \end{cases} \quad (1)$$

Note that since higher values of  $j$  characterize more skilled individuals, it is reasonable to assume that  $v(j)$  increases with  $j$ . This is illustrated in the left panel of Figure 1. At the same time, equation 1 implies that the value of the match for worker  $j$  is maximized if he occupies a vacancy offered by a firm of type  $j$ . Furthermore, this value is zero if a migrant of skill level  $j$  ends up in a job  $i$  for which he is under-qualified (i.e.  $j < i$ ) and finally, if a migrant of skill  $j$  obtains a job for which he is over-qualified (i.e.  $j > i$ ), then the value of the match is still positive, but smaller than the one that could be achieved if  $i = j$ . The behavior of  $v(i, j)$  as a function of the firm’s skill intensity  $i$  is illustrated in the right panel of Figure 1.<sup>9</sup> Consider an individual with a skill level  $j > 0$ . If he is matched with a firm with skill intensity  $i = 0$ , the

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<sup>7</sup>Modeling the presence of substitutability between migrants and natives would complicate the model, without affecting our analysis since the decision to support or not an amnesty is determined by the constituency’s aggregate welfare.

<sup>8</sup>We have chosen this terminology for expositional convenience, but we could as well think of domestic factor owners simply as workers whose skills are combined in a firm with those of the migrants to produce output, and our results would not be affected.

<sup>9</sup>Note though that our assumptions on  $v(i, j)$  do not rule out the possibility that the value created by a highly skilled individual, if he is matched to a low-skill job, is higher than the value created by a low-skill individual for whom that job represents the ideal match. Formally, this means that  $v(j, j + 1) \geq v(j, j)$ .

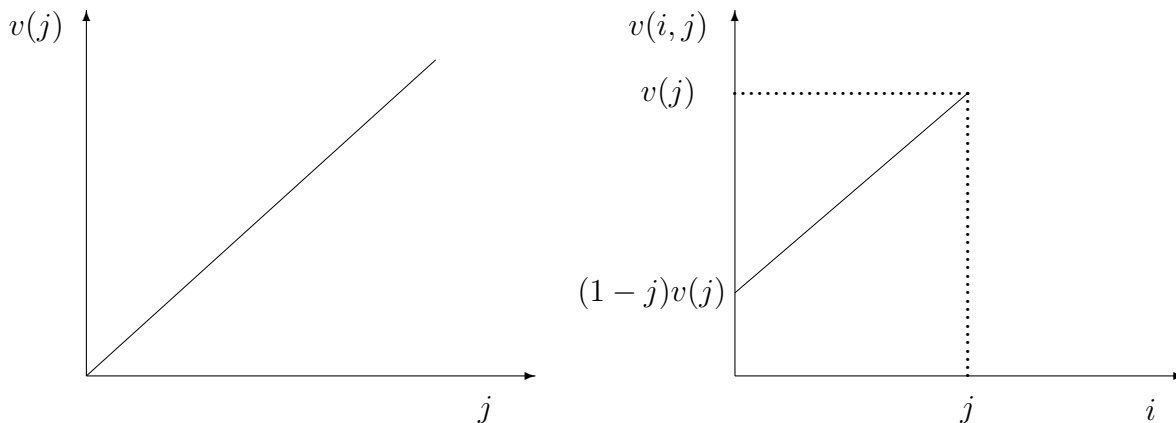


Figure 1: The value of a match

value of the match is given by  $(1-j)v(j)$ . If he is instead matched with a firm of skill intensity  $0 < i \leq j$ , the match's value is given by  $[1 - (j-i)]v(j)$ . Finally, if he is matched with a firm of skill intensity  $i > j$ , no value is created, i.e.  $v(i, j) = 0$ . The probability that individual  $j$  is matched to vacancy  $i$  is described by the joint density function  $f(i, j)$ .

The status quo migration policy – common to all constituencies – involves a minimum skill requirement  $j^*$  for legal migrants, which cannot be perfectly enforced. The result is that illegal immigration will emerge if the policy is always binding, i.e. if there are always more migrants willing to enter than those accepted as legal. We will assume this to be the case throughout our analysis.<sup>10</sup> Note that modeling the migration policy as a minimum skill requirement enables us to capture an important difference between legal and illegal migrants, i.e. the fact that the former are – on average – more skilled than the latter (see for instance Passel 2005 and Hanson 2007). Furthermore, skill selective immigration policies are becoming increasingly widespread among many important destination countries, as documented by Boeri et al. (2012).

A formal and an informal sector coexist in the economy, and we assume that on average the former requires a more highly skilled labor force than the latter. This is consistent with the evidence reported by Schneider (2011), who documents that the shadow economy is particularly large in unskilled labor intensive industries such as construction, wholesale and retail trade and hotels and restaurants. We model the different factor requirements of the two sectors by assuming that firms with skill intensity above a given threshold  $\tilde{i}$  represent the formal economy, whereas firms with skill intensity below  $\tilde{i}$  constitute the informal economy. Importantly, while legal migrants can work in both sectors, illegal immigrants do not enjoy the same employment opportunities, and can work only in the informal sector.<sup>11</sup>

<sup>10</sup>See Mayda (2010) for evidence that migration policies in many destination countries are likely to be binding.

<sup>11</sup>Notice that our results would not be affected if we allowed the two sectors to partially overlap in terms of



The number of legal migrants, i.e. those whose skill level is above the threshold  $j^*$ , is given by  $M(j^*, 1) = \int_{j^*}^1 m(j) dj$ , whereas the number of illegal immigrants is given by  $M(j^{ill}, j^*) = \int_{j^{ill}}^{j^*} m(j) dj$ , where  $j^{ill}$  is the exogenously given skill level of the least qualified migrant worker entering the country illegally. If legal migrants are employed in the formal sector, they generate a total expected income denoted by

$$V(j^*, 1; \tilde{i}, 1) = \int_{j^*}^1 \int_{\tilde{i}}^1 v(i, j) f(i, j) di dj \quad (2)$$

whereas if they end up in the informal sector, they generate a total expected income given by

$$V(j^*, 1; 0, \tilde{i}) = \int_{j^*}^1 \int_0^{\tilde{i}} v(i, j) f(i, j) di dj. \quad (3)$$

Illegal migrants can work only in the informal sector, i.e. for every illegal migrant  $j$ , with  $j < j^*$ ,  $v(i, j) = 0$  if  $i > \tilde{i}$ . They generate an expected income given by

$$V(j^{ill}, j^*; 0, \tilde{i}) = \int_{j^{ill}}^{j^*} \int_0^{\tilde{i}} v(i, j) f(i, j) di dj \quad (4)$$

Our assumption that immigration policy is always binding results in  $j^{ill} < j^*$ , i.e. illegal immigration always takes place. Moreover, to make the problem interesting, we impose that  $j^{ill} < \tilde{i} < j^*$ , i.e. that at least some illegal migrants are sufficiently skilled that in the absence of restrictions to their employment opportunities, they could be employed in the formal sector.<sup>12</sup> The top portion of Figure 2 illustrates the status of migrants according to their skill level, whereas the bottom one shows the breakdown of firms between those active in the formal and those active in the informal sector, depending on their skill intensity. Natives and migrants share the expected value of a match. Let  $\alpha$  and  $\beta$  be respectively the fractions which are appropriated by each firm's owner in the formal and in the informal sectors, with  $\beta \geq \alpha$  to capture the idea that the bargaining power of firms' owners is likely to be larger in the informal rather than in the formal sector.

The district is characterized by the presence of a redistributive welfare system, which has important implications for the desirability of an immigration amnesty (Razin, Sadka, and Swagel 2002). We assume that redistribution takes place by means of an exogenously given proportional income tax  $\tau$  and a lump-sum transfer  $b$ , which adjusts in order to keep the budget balanced. All natives and legal immigrants in the formal sector contribute to the welfare system, whereas both natives and migrants active in the informal sector do not. All natives and

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skill intensity, as long as illegal immigrants continue to be restricted in their labor market opportunities.

<sup>12</sup>This assumption is in line with the evidence reported in Kossoudji and Cobb-Clark (2002) indicating that the wages of legalized migrants increase as a result of the legalization.

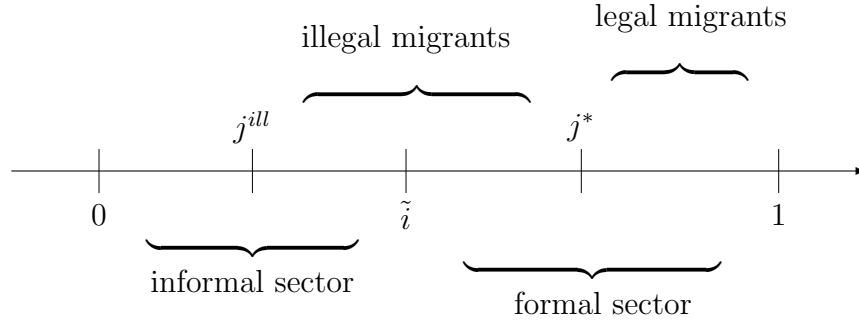


Figure 2: The distribution of migrants  $j$  and firms  $i$

legal migrants are entitled to receive the welfare state benefits, whereas illegal migrants are not.<sup>13</sup> The constituency's budget is thus given by

$$\tau V(j^*, 1; \tilde{i}, 1) = b [N + M(j^*, 1)] \quad (5)$$

To capture the existence of a fiscal leakage from the natives to the legal immigrants (Razin, Sadka, and Swagel 2002), we assume that the average taxable income of the natives is higher than the average taxable income of the legal immigrants. The former is given by

$$Y^N = \alpha \frac{V(j^*, 1; \tilde{i}, 1)}{N} \quad (6)$$

whereas the latter is captured by

$$Y^M = (1 - \alpha) \frac{V(j^*, 1; \tilde{i}, 1)}{M(j^*, 1)} \quad (7)$$

The condition for the presence of a fiscal leakage can then be rewritten as

$$\frac{\alpha}{1 - \alpha} > \frac{N}{M(j^*, 1)} \quad (8)$$

for any possible  $j^*$ . Note that this assumption implies that on average natives will be net contributors to the welfare state, whereas legal immigrants will be on average net receivers. At the same time, it might well be that some migrants are net contributors and some natives end up on the receiving end of the welfare state.

<sup>13</sup>Of course these are simplifying assumptions, but they capture the stylized facts that the informal sector is often characterized by widespread tax evasion and legal and illegal migrants differ in their net position towards the welfare state. See Camarota (2004).

### 3 When is a legalization desirable?

In this section we determine the conditions under which a legalization program is desirable from the point of view of a policy maker who maximizes the aggregate welfare of the natives in her constituency.<sup>14</sup> If an amnesty is introduced, it involves all illegal immigrants,<sup>15</sup> and will have the following effects. First, legalized migrants will have access to the full set of occupations, i.e. those in the formal and those in the informal sector. At the same time, they will receive benefits from the welfare state, but they will contribute to it only if they work in the formal sector. In other words, legalized migrants share the same rights and obligations as the natives.

The welfare of the constituency is denoted by  $w^z$ , with  $z \in \{A, NA\}$ , where A stands for amnesty and NA for the lack of it. If no legalization is implemented, at the status quo policy  $j^*$  we have

$$w^{NA}(j^*) = \alpha(1 - \tau)V(j^*, 1; \tilde{i}, 1) + \beta V(j^{ill}, 1; 0, \tilde{i}) + b^{NA}N \quad (9)$$

with  $b^{NA} = b$  determined from equation 5. Thus, welfare depends on the net income accruing to the natives from the employment of legal migrants in the formal sector (first term on the right hand side), in the informal sector (second term) and on the lump-sum fiscal transfer received by the natives (third term). If an amnesty is introduced we have instead

$$w^A = \alpha(1 - \tau)V(j^{ill}, 1; \tilde{i}, 1) + \beta V(j^{ill}, 1; 0, \tilde{i}) + b^A N \quad (10)$$

with

$$b^A = \frac{\tau V(j^{ill}, 1; \tilde{i}, 1)}{N + M(j^{ill}, 1)}. \quad (11)$$

Note that when a legalization is implemented (see equation 10) all migrants present in the constituency can be employed in the formal sector (first term in equation 10), but some of them will still end up in the informal one (second term in equation 10). Moreover,  $b^A < b^{NA}$  because all immigrants working in the formal sector are fully engaged in the welfare state and their taxable income is on average lower than that of natives. We can then establish the following result:

**Proposition 1** *A legalization is more likely to be supported the bigger is the gain to aggregate income accruing to natives by allowing legalized workers access to a broader range of occupations, and the smaller is the size of the welfare state.*

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<sup>14</sup>The process through which the aggregation of individual preferences takes place is obviously more complex, but welfare maximization is a useful theoretical benchmark. In our empirical analysis we take that into account, for example, by exploring the role played by pressure groups.

<sup>15</sup>We do not consider selective amnesties, as this would complicate the analysis, without changing the main determinants of the introduction of legalization programs. Moreover, the conditions we uncover for the desirability of general amnesties are more stringent than those which would apply to the implementation of selective measures.

**Proof.** Subtracting equation 9 from equation 10 we obtain the following expression, which captures the incentives faced by the policy maker to support an amnesty:

$$w^A - w^{NA} = \alpha V(j^{ill}, j^*; \tilde{i}, 1) + [N(b^A - b^{NA}) - \alpha\tau V(j^{ill}, j^*; \tilde{i}, 1)]. \quad (12)$$

The first term captures the labor market matching channel: the bigger is  $V(j^{ill}, j^*; \tilde{i}, 1)$ , the more likely it is that an amnesty will be supported. The second term, which is negative, denotes the effect of the welfare state on the desirability of an amnesty. Furthermore, note that

$$\frac{\partial[w^A - w^{NA}]}{\partial\tau} = -N \left[ \frac{V(j^*, 1; \tilde{i}, 1)}{N + M(j^*, 1)} - \frac{V(j^{ill}, 1; \tilde{i}, 1)}{N + M(j^{ill}, 1)} \right] - \alpha V(j^{ill}, j^*; \tilde{i}, 1) < 0. \quad (13)$$

In other words, a more redistributive welfare state will make an amnesty less desirable, as it increases the welfare leakage to the migrants. ■

Summing up, our theoretical model indicates that the incentives to legalize are stronger the bigger is the gain to expected aggregate income brought about by granting legalized workers access to all the available employment opportunities. In addition, a more redistributive welfare state makes an amnesty less desirable, as it entitles lower-skilled legalized foreign workers to benefits. In the remainder of the paper, we investigate the empirical relevance of the labor market and welfare state channels in explaining the incentives to support a legalization program.

## 4 IRCA

To assess the implications of our theoretical model, we study the determinants of the voting behavior of U.S. representatives on the Immigration Reform and Control Act (IRCA) of 1986. IRCA introduced the largest immigrant legalization in U.S. history, which enabled 2.8 million undocumented immigrants to gain permanent legal status.

To understand the context in which IRCA was introduced, we must bear in mind that U.S. immigration policy was fundamentally changed by the Immigration and Nationality Act of 1965, which abolished the national-origin quota system introduced in the Twenties. Instead, a quota of 170,000 was introduced for the Eastern hemisphere, with a cap of 20,000 admissions for each individual country. Moreover, a new quota for the Western hemisphere – which had been exempted under the old regime – was also devised, setting an overall limit of 120,000 admissions, but without an individual country cap. Following the first oil crisis and the ensuing stagflation, Congress introduced a series of restrictive immigration policy measures, ranging from provisions for employer sanctions to tackle the growing employment of undocumented immigrants, to the extension of the applicability of the 20,000 per-country cap to migrants from the Western hemisphere, a measure aimed at limiting immigration from Mexico (Facchini

and Steinhardt 2011 and Gimpel and Edwards 1999). In 1978 the two quotas were merged in an overall worldwide total of 290,000 permanent admissions, with a 20,000 limit for each individual country (Hatton 2015).

To respond to the increasing concerns about the growing size of the undocumented immigrant population, President Carter and Congress, pressed by Senator Kennedy and Representative Eilberg, set up the Select Commission on Immigration and Refugee Policy (SCIRP) (LeMay 2006), which started its activities in 1979, and reported its findings to President Reagan in 1981. SCIRP was established – along the lines of the Dillingham Commission seventy years earlier – as a special bipartisan committee in charge of studying ways of reforming American migration policy. The Commission’s final report recommended tougher measures to address undocumented immigration, while at the same time, adopting a more open stance towards legal migrants. Furthermore it argued in favor of the introduction of a legalization program for the existing stock of undocumented immigrants, pointing out that this would be “consistent with American interests” and that “qualified aliens would be able to contribute more to U.S. society once they came into open” (Select Commission on Immigration and Refugee Policy 1981, p. 74).

After the publication of SCIRP’s final report, the chairmen of the Senate and House Judiciary Subcommittees on Immigration, senator Alan Simpson and congressman Romano Mazzoli took the initiative to incorporate some of its recommendations in the *Simpson-Mazzoli bill* (*H.R. 1510*), which was introduced in Congress in 1982. The first major provision of the bill was to make it illegal to knowingly hire or recruit undocumented immigrants, introducing also penalties for those employing illegal aliens. A second major component was the requirement for employers to attest their employees’ immigration status. Last, but not least, it granted an amnesty to certain agricultural seasonal workers and immigrants who entered the U.S. before January 1, 1982 and had lived there continuously. The bill proposal was - from its initial introduction on the Senate floor in 1982 - very controversial, as the provision of sanctions for employers drew strong opposition from liberal democrats, business groups and Latino pressure groups. As a result, the measure was withdrawn. Further consideration to the bill was given during the subsequent Congress, but the measure was finally voted upon in the same form by the two chambers only in 1986, and was signed into law by President Reagan as the *Immigration Reform and Control Act* (*H.R. 3810, IRCA*).

The main difference with the original Simpson-Mazzoli bill was the addition of a temporary program for agricultural workers, which was requested by the agricultural lobby and strongly opposed by organized labor (Gimpel and Edwards 1999). As a result, IRCA included provisions for two large immigration amnesties: the Legally Authorized Workers (LAW) and the Special Agricultural Worker (SAW) programs. The LAW program was open to aliens who had resided continuously in the U.S. since at least January 1, 1982, and allowed more than 1.6 million

immigrants to achieve legal status. The SAW program provided instead a pathway to legal status for undocumented aliens who worked in the agricultural sector for at least 90 days during the year ending May 1, 1986, and turned out to allow the legalization of over 1.2 million unauthorized immigrants. Several studies on the effects of these amnesties show that newly legalized immigrants saw, on average, increases in their wages, wage growth, and returns to skills (e.g., Borjas and Tienda 1993; Kossoudji and Cobb-Clark 2002; Amuedo-Dorantes, Bansak, and Raphael 2007) due to an increase in their geographical and occupational mobility, and to better labor market matches (Amuedo-Dorantes and Bansak 2011 and Steigleder and Sparber 2015).

## 5 Data

The construction of our dataset draws on a number of different sources.

We obtained information on individual representatives' voting behavior on IRCA from the VOTEVIEW project (<http://voteview.ucsd.edu>) of Poole and Rosenthal (1997), which also contains information on congressmen's name, party affiliation, state of residence, and congressional district. We rely instead on ICPSR Study number 7803 and the data base built by Swift et al. (2000) for information on representatives' age and gender. Our dependent variable is a dummy taking value 1 if the representative has voted in favor of IRCA and 0 otherwise.

The legal status has an impact on the set of labor market matches that are available to migrants (Amuedo-Dorantes and Bansak 2011). Our model suggests that an amnesty is more likely to be introduced the larger is the increase in output induced by the legalization. This depends on the quality of the initial job match of illegal immigrants, as measured by their degree of over-education. For this reason we construct, for each congressional district, indicators of undocumented immigrants' over-education based on data from the 1980 Census of Population, obtained from IPUMS. In particular, we consider the distribution of educational attainment of workers for each occupation, and classify as over-educated employees who have a level of education one standard deviation above the mode of natives in that occupation. We then use this measure to construct the district-level share of illegal workers that are over-educated.<sup>16</sup> Specifically, we proceed as follows. First, we transform the Census variable on educational qualification into years of education. Second, we compute for every two-digit occupation category<sup>17</sup> the mode of the number of years of education for native workers, and its standard deviation. Third, for all employees we construct a dummy variable taking value 1 if their level of education is one standard deviation above the mode of natives' education in their occupation and 0 otherwise. Fourth, we compute for each district separately for natives and illegal immigrants the mean value of the dummies defined above, which gives the district-level share

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<sup>16</sup>For a discussion of this type of indices see Verdugo and Verdugo (1988) and Chevalier (2003).

<sup>17</sup>As a result, we consider a total of 82 occupations.

of over-educated natives and illegal immigrants. A higher value of the over-education index for illegal immigrants suggests a worse allocation of immigrants' skills across occupations and therefore the possibility of larger output gains which make a legalization more likely to be implemented. The corresponding measure for natives captures the general level of skill mismatch prevailing in the local labor market. As a robustness check, we also compute the measure of over-education based on deviations from the median. Since standard sources do not report information on immigrants' legal status, we cannot directly observe the variable we are interested in. However, we know that between 70% and 80% of the participants in IRCA's legalization programs were from Mexico and about 8% from El Salvador (see Borjas and Tienda 1993 and Baker 2010). We therefore proxy the degree of over-education of illegal immigrants with the over-education of immigrants from Mexico and El Salvador.

Our model indicates also that, within a given constituency, a more redistributive welfare state makes an amnesty less desirable, as it increases the welfare leakage to undocumented migrants. To obtain a measure of the welfare leakage, we focus first on the tax burden on American households. The latter depends on the amount of both local (state and sub-state) and federal taxes. Legalization is more likely to be opposed in those areas with a relatively high level of local tax burden, and a significant number of undocumented immigrants. At the same time, the potential cost of legalization for the federal coffers is borne by residents of all districts, even those with virtually no undocumented immigrants. For these reasons, in our empirical analysis we capture the working of the welfare state channel in two complementary ways. First, we measure the local fiscal costs of a legalization with a dummy variable that identifies districts characterized by a high level of local tax payments, and by a high presence of undocumented immigrants. Specifically, from the Data Base on Historical Finances of Local Governments: "*County Area Finances*"<sup>18</sup> we calculate the per capita revenues of local governments<sup>19</sup> at the county level in 1982, and aggregate them up at the congressional district level.<sup>20</sup> We then define a dummy variable that identifies the districts above the 75th percentile of the distribution of per capita revenues of local governments. Similarly, we define a dummy variable that indicates the districts characterized by a share of Mexican and Salvadorian immigrants in the total population above the mean, or alternatively above the 75th percentile. We then combine this information in a "High local tax exposure" indicator, which takes a value equal to one if both of the previous indicators are equal to one, and zero otherwise.<sup>21</sup> Second, we capture a district's

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<sup>18</sup>See Bureau of the Census (1982).

<sup>19</sup>Local governments comprise counties, municipalities, townships, special districts, and independent school districts.

<sup>20</sup>In particular, we compute weighted averages based on the share of each county in the total population of the district. This applies also to counties split across more than one district. In this case a county's population is attributed to a particular district, assuming that the former is geographically uniformly distributed. For a similar approach see for instance Conconi, Facchini, and Zanardi (2012).

<sup>21</sup>For a similar procedure, see Hanson, Scheve, and Slaughter (2007).

fiscal stance vis á vis the federal government by including the log-median (mean) income of the congressional district from the Congressional District Data Files of Lublin (1997) and Adler (2003).

In some specifications we will also control for additional factors that may drive a representative’s voting behavior. First, we account for the ethnic composition of each district by including the share of the population with an African-American or Latino background, taken from the 1980 U.S. Census. Next, we control for a measure of immigrant penetration in the district, i.e. the ratio of foreign to natives in the district’s working age population. We also construct a variable measuring the share of the population living in urban areas, to account for potential differences between rural and urban areas in attitudes toward immigrants’ legalization. A district’s factor endowment has been shown (Conconi et al. 2012) to play an important role in shaping policy preferences, and we measure it with the district-level share of individuals with at least a bachelor’s degree in the total population over 25 years of age. We additionally include the district-level unemployment rate, defined as the ratio of individuals looking for a job out of the total labor force. We also control for the sectoral composition of the local economy, using the share of individuals in the labor force employed in each one digit sector.<sup>22</sup> Finally, since pressure groups may play a significant role in determining representatives’ voting behavior, in some robustness checks we proxy for their influence using data on labor and corporate Political Action Committees (PAC) contributions, provided by the Federal Election Commission (<http://www.fec.gov/>). As PAC contributions measure lobbying effort on a variety of different issues, we construct two indicator variables taking a value of one if the politician has received contributions that are at or above the eightieth percentile of all corporate (labor) contributions in that year.<sup>23</sup>

We report summary statistics for all the variables used in the analysis in Table 1. As we can see, IRCA was a controversial measure, and cleared the House with a 58 to 42 percent majority. On average, the share of undocumented immigrants who are over-educated in a district is around 10 percent, whereas the corresponding figure for natives is approximately 13 percent. This difference can be explained by the fact that undocumented migrants are substantially less educated than natives – on average they have only 8.5 years of education, compared with 13.35 for the natives. As a result they are less likely than natives to be employed in occupations which require less education than the level they have attained. Finally, the share of districts exhibiting high local tax exposure is approximately 7 percent of the total and the median family income is approximately 20,055 US dollars, with a standard deviation of 4,003.

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<sup>22</sup>These are: agriculture, construction, manufacturing, transport, communication, trade, finance, business and repair services, entertainment, health and education, other professional services and public administration. Details on the data construction are available from the National Historic Geographical Information System website, <https://www.nhgis.org/> and Bureau of Labor Statistics website <http://www.bls.gov/iag/home.htm>.

<sup>23</sup>See Facchini, Frattini, and Signorotto (2013) for a similar strategy.



Figures 3 and 4 illustrate the main forces at work in our model. In particular, Figure 3 reports a map of Florida’s congressional districts during the 99th congress.<sup>24</sup> Consider district 12 and 15. While almost 18% of the undocumented residents of district 15 are over-educated according to our definition, the same is true for less than 1% of the undocumented residents of district 12.<sup>25</sup> Our theoretical model suggests that the incentives to legalize will be, *ceteris paribus*, higher in district 15 than in district 12. In fact, the representative of district 12, Tom Lewis (R) voted against IRCA, while congressman Clay Shaw (R), representing district 15, voted in favor. Consider now Figure 4, which reports instead a map of California’s congressional districts. District 10 is characterized by a high local tax exposure, and by a median per capita income above the 80th percentile. District 15 has instead a low local tax exposure and a considerably lower median per capita income, below the 30th percentile. Interestingly, congressman Don Edwards (D) – representing district 10 – voted against IRCA, whereas congressman Tony Coelho (D) – representing district 15 – supported it, as suggested by our theoretical model. While Figures 3 and 4 uncover some interesting patterns, in the remainder of this paper we will systematically study their role in shaping individual congressmen voting behavior on this important bill.

## 6 Empirical analysis

Our model identifies two drivers that play a role in shaping support for the introduction of an amnesty. It suggests that an amnesty is more desirable the higher is the share of over-educated illegal immigrants, since this leads to a larger expected output gain associated to the legalization. At the same time, the more generous is the welfare state, the less desirable is an amnesty, as the fiscal leakage to migrants is more severe. To assess these predictions, we estimate the following logit model:

$$\begin{aligned}
 Prob(Vote_d = 1|Z_d) = F(\alpha IllegalsOverEdu_d + \beta Highlocaltaxexp_d + \\
 + \gamma \lnmedianincome_d + \mathbf{R}_d\delta + \mathbf{X}_d\lambda + I_s)
 \end{aligned}
 \tag{14}$$

where  $Vote_d$  is a dummy variable indicating whether the representative of district  $d$  has voted in favor of IRCA;  $IllegalsOverEdu_d$  is the share of Mexican and Salvadorian workers in district  $d$  that are over-educated, which proxies for the share of over-educated illegal immigrants;  $Highlocaltaxexp_d$  is the “High local tax exposure” measure defined in section 5 and  $\lnmedianincome_d$  is the logarithm of the median family income in the district.  $\mathbf{R}_d$  is a vector

<sup>24</sup>The map has been extracted from Lewis, DeVine, Pitcher, and Martis (2013), retrieved from <http://cdmaps.polisci.ucla.edu> on October 9, 2015.

<sup>25</sup>As a result, district 15 is at the 83rd percentile of the distribution, whereas district 12 is in the bottom 25%.

of control variables which includes representatives' characteristics (party affiliation, age and gender) and  $\mathbf{X}_d$  is instead a vector of district-level controls, including economic (the share of native workers that are over-educated, skill ratio, unemployment rate and share of workers employed in each one digit sector), residential (share of urban population), and ethnic characteristics (share of immigrants, share of African American and Latino residents). Finally,  $I_s$  are state dummies that account for unobserved state-specific factors.  $F(x) = \frac{1}{1+\exp(x)}$  is the distribution function of the logistic distribution.

Table 2 contains our main findings. To simplify the interpretation of the results, we report average marginal effects.<sup>26</sup> In column (1) we start with a parsimonious specification that includes only our main explanatory variables and state fixed effects. The results show that there exists a positive and statistically significant relationship between the share of over-educated illegal immigrants in a district and the probability of a representative voting in favor of IRCA. This is consistent with the prediction of our model that a larger mismatch between undocumented immigrants' skills and their job increases the likelihood that a representative will support a legalization program. As for the role of the welfare state, the results in column 1 indicate that a greater welfare leakage towards immigrants – as measured by our two complementary measures – has a negative impact on support for an amnesty, but this effect is not statistically significant.

As pointed out in the literature, several other factors might explain the support for immigration policy reform (Facchini and Steinhardt 2011) and, as a result, our parsimonious specification might suffer from an omitted variable bias. For instance, Democratic districts are likely to exhibit both higher local taxes, and express a representative who is in favor of IRCA. If this is the case, then the omission of a representative's party affiliation biases the estimated effect of *High local tax exposure* towards 0. For this reason, in column (2) we augment our basic specification to include a series of representative-level controls such as age, gender and an indicator for whether he is a Democrat. Interestingly, we find that Democratic representatives have a 36 percentage points higher probability of supporting IRCA than their Republican counterparts, even within the same state. Furthermore, the estimated effect of local tax exposure becomes considerably more negative and statistically significant.

In column (3) we additionally control for a set of district level characteristics. We find that representatives of districts characterized by a higher share of the population living in urban areas are more likely to support IRCA. Similarly, we find that representatives of more skilled labor abundant districts are also more in favor of the amnesty, confirming previous findings in the literature suggesting that complementarities between the skills of natives and immigrants play an important role in explaining support for migration liberalization (Facchini and Stein-

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<sup>26</sup>Average marginal effects are calculated as the mean of the marginal effects obtained by varying the variable of interest for a given observation, while holding all other controls at their original values.

hardt 2011). Finally, we find that representatives of districts characterized by a larger share of African Americans in the population are less likely to support the legalization programs. A possible explanation is represented by the fact that this group is the most likely to face direct competition by legalized migrants in the labor market. We find also some evidence that representatives of districts characterized by a larger Latino population are less likely to support this initiative, but this finding is no longer significant when we control for the sectoral composition of the district’s economy in column (4). In fact, as we have already argued in section 4, Latinos held ambiguous views towards this legislation, and several Latino pressure groups were concerned with some of the provisions of IRCA, in particular those aimed at tightening up immigration policy enforcement, that would make employing illegal immigrants in the future more difficult and increase the pervasiveness of racial profiling. Our specification also includes as a control the share of native workers in the district that are over-educated to account for the general skill mismatch, and we find that the latter does not play a significant role in explaining the choice of the local representative. Turning to our key explanatory variables, controlling for additional district characteristics strengthens the empirical support for our model. In particular the estimated effect of median family income becomes considerably more negative and statistically significant. In our last specification in column (4) we additionally control for the distribution of employment across industrial sectors in a given district. Our main results are unaffected.

Summarizing, our empirical findings provide strong support to the predictions of the theoretical model. In terms of the magnitudes of the effects, our preferred specification in column (4) indicates that an increase by ten percentage points in the share of over-educated illegals (about 60% of a standard deviation) leads on average to an increase of 3.7 percentage points in the probability of a representative voting in favor of IRCA (an increase of about 6.3% at the sample mean); at the same time, representatives of district facing high local fiscal exposure to immigrant legalization (7% of the total) are 28.9 percentage points (58% at the sample mean) less likely to support IRCA; finally, a 10% higher median family income in the district (about half of a standard deviation) is associated with a 9.6 percentage points (16.5% at the sample mean) decrease in the probability of a representative supporting IRCA.

## 7 Robustness Checks

In this section we assess the robustness of our results.

We start in Table 3 by experimenting with alternative definitions of our key explanatory variables, using the specification in column (4) of Table 2 as the benchmark, which to simplify

comparisons is reported in column (1).<sup>27</sup> In columns (2) and (3) we use alternative definitions of the over-education index. In column (2) we classify as over-educated individuals with a schooling level higher than the mode of their occupation, rather than one standard deviation higher than the mode, as in our main specification; in column (3), instead, we compute the baseline over-education index referring to the median value of the schooling level within occupations, rather than to the mode. Results with both alternative indices closely resemble those of the benchmark. In columns (4) and (5) we use alternative measures of the extent of local redistribution. First, in column (4) we redefine our *High local tax exposure* indicator. In particular, we characterize a district as having “high illegal immigration” if it has a share of illegal immigrants above the districts’ average, rather than in the top 25% of the districts as in our benchmark case. In column (5), we instead rely on mean, rather than on median family income to capture a district’s fiscal stance vis á vis the federal government. Neither of these two changes has any significant effect on our results.

In Table 4, we report results with alternative or additional control variables, while keeping the definition of our main explanatory variables as in the benchmark. First, in columns (1) and (2), we experiment with different measures of the ideological orientation of the representative. In column (1) we replace democratic party affiliation with the normalized DW nominate score – which increases in an individual’s conservative orientation, whereas in column 2 we use the ADA score, which assesses every legislator on a scale from 0 to 100, with higher figures assigned to more liberal politicians.<sup>28</sup> As expected, we still find that more liberal-leaning representatives are more likely to support IRCA, while the estimates of our main coefficients are not affected. In column (3) we additionally control for the share of democratic votes in the last congressional election. This does not play a significant role, and does not affect our main results.

In columns (4) and (5) we replace our measure of a district’s skill composition with the ratio of high school graduates and college graduates to high school dropouts (column 4) and the ratio of individuals employed in high versus low skilled occupations (column 5). Our results are unaffected. In column (6) we replace the immigrants/natives ratio in the district’s working age population with a more flexible functional forms specification, i.e. the logarithm of the number of immigrant and native residents in the same age range. Once again, our results are not affected. Finally, since pressure groups may play a significant role in determining representatives’ voting behavior, in column (7) we proxy for their influence using data on

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<sup>27</sup>Note that we omit the coefficients for the individual and district level characteristics to make the table more readable. Note though that the patterns identified for these controls in column (4) of Table 2 continue to hold throughout.

<sup>28</sup>The DW-nominate measure is provided by the VOTEVIEW project, whereas the ADA score is constructed by the American for Democratic Action, a lobby group. The main difference between the former and the latter is that the ADA score uses only votes on a sub-sample of bills cast in each congress, whereas the DW nominate score employs every roll call votes in each congress, and is based on a more sophisticated estimation procedure.

labor and corporate Political Action Committees (PAC) contributions. As PAC contributions measure lobbying effort on a variety of different issues, we construct two indicator variables (*PacCorporate* and *PacLabor*) taking a value of one if the politician has received contributions that are at or above the eightieth percentile of all corporate (labor) contributions in that year.<sup>29</sup> Interestingly, our results show that larger contributions by business related lobbies result in a higher likelihood of voting pro-IRCA. At the same time, labor PAC contributions do not appear to affect the voting behavior of elected officials. The size and significance of our regressors of interest is however not affected.

Finally, we have performed several checks to assess the robustness of our results to alternative econometric specifications. We display these results in Table 5. In column (1) we start by reporting mean marginal effects from estimating a probit model, rather than a logit model as in our main analysis. Our findings are comparable to those in our baseline results in column (4) of Table 2.

In the presence of state fixed effects, both our logit and probit specifications use information only from states in which all congressional representatives did not vote in the same way. To use instead all the information available in our data – thus increasing by approximately 15 percent the number of observations effectively used – we report in column (2) the results of a linear probability model. Importantly, the size and significance of our main coefficients of interest is practically unaffected.

As we have already discussed in Section 5, IRCA was very controversial and out of a total of 435 members of the House, 39 decided not to cast a ballot in favor or against the measure. In our baseline specification we have simply omitted districts whose representative did not vote on IRCA, but this choice might lead to biased estimates if the selection of representatives into voting is non – random. To address this concern, we have additionally estimated a two–step Heckman selection model and the results are reported in columns (3) and (4). In particular, we have implemented the following specification:

$$Vote_d = \mathbf{X}\beta + u_d \tag{15}$$

$$CastBallot_d = 1 \text{ if } \mathbf{Z}\gamma + e_d \geq 0 \tag{16}$$

where  $\beta$  and  $\gamma$  are parameter vectors,  $\mathbf{X}$  and  $\mathbf{Z}$  are vectors of controls (with potentially common elements),  $u_d$  and  $e_d$  are normally distributed error terms and  $Corr(u_d, e_d) = \rho$ . Equation 15 is the main specification, whereas equation 16 models the possible presence of sample selection. In particular, note that  $Vote_d$  is observed only if  $CastBallot_d = 1$ . Of course, if  $\rho = 0$ , selection is not a concern, and equation 15 can be estimated consistently on its own. These ‘stand alone’ estimates are those reported in column (2) of Table 5. To identify the possible effect of selection,

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<sup>29</sup>See Facchini, Frattini, and Signorotto (2013) for a similar strategy.

without resorting to a functional form restriction in the selection equation, we need to include in equation 16 at least one additional control that is not included in equation 15 and that, conditional on  $\mathbf{X}$ , affects the probability of casting a ballot without directly affecting the vote on the migration initiative.

To this end, for each representative we have constructed a proxy for his propensity to cast a ballot in that Congress,  $ShareVoted_d$ , using the share of “Yes” or “No” votes cast over all roll call votes are available, with the exclusion of those on IRCA. This variable is arguably correlated with the probability to take part on the IRCA vote but, conditional on all other control variables, should not have a direct effect on the likelihood to support IRCA. Columns (3) and (4) report our findings. Focusing on the estimates of the selection equation reported in column (4), we can immediately see that the coefficient of  $ShareVoted_d$  is positive and strongly significant, suggesting that this variable affects the probability of casting a ballot on migration bills. Furthermore, the estimated coefficient of the inverse of the Mills’ ratio indicates that we can reject the null hypothesis of no sample selection bias, as it is positive and statistically significant. Still, the magnitude and statistical significance of our main results do not appear to be materially affected (see column 3).

## 8 Conclusions

We have developed a general model of legal and illegal immigration to understand the basic trade-offs faced by an elected official in the decision to support an immigration amnesty in the presence of a selective immigration policy. In our model we have shown that an amnesty is more desirable the bigger is the gain to aggregate income induced by granting legalized workers access to all the available employment opportunities. On the contrary, a more redistributive welfare state makes an amnesty less desirable, as lower-skilled legalized foreign workers become entitled to welfare state benefits.

We have then assessed the relevance of the drivers identified by our theoretical analysis by studying the role played by each of them in determining the voting behavior of members of the U.S. Congress on the IRCA legalization program. We have found strong support for our model, obtaining results that are robust to a variety of alternative specifications.

We can think of several avenues along which our analysis could be extended. First, in our theoretical setting the policy maker acts as a pure welfare maximizer.<sup>30</sup> An alternative would involve taking explicitly into account political economy forces that do play an important role in shaping immigration policy and its enforcement. Second, our theoretical analysis has abstracted away from the problem of aggregating individual congressmen preferences and the possibility

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<sup>30</sup>In the empirical analysis, though, we have taken into account the role that organized pressure groups might play.

of strategic interactions among representatives. Clearly, coalition building in Congress is a complex issue, as the failure of passing a comprehensive immigration policy reform during the Obama administration has shown. While both are important questions, we leave them for future research.

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**Table 1 - Summary statistics**

	Obs	Mean	Std. Dev.	Min	Max
Vote	396	0.581	0.494	0.000	1.000
Illegals' over-education	435	0.100	0.162	0.000	1.000
High local tax exposure	426	0.070	0.256	0.000	1.000
Median family income	435	20055	4003	8434	33404
Democrat	435	0.582	0.494	0.000	1.000
Age	427	50.255	10.706	28	85
Sex	435	0.947	0.224	0.000	1.000
Natives' over-education	435	0.132	0.029	0.068	0.210
Skill ratio	435	0.161	0.064	0.041	0.430
Unemployment	435	0.067	0.025	0.019	0.219
Share of total workers employed in:					
Agriculture	435	0.042	0.043	0.001	0.202
Construction	435	0.059	0.019	0.011	0.129
Manufacturing	435	0.224	0.084	0.043	0.480
Transport	435	0.044	0.014	0.020	0.117
Communication	435	0.029	0.006	0.016	0.061
Trade	435	0.204	0.022	0.130	0.261
Finance	435	0.059	0.022	0.028	0.176
Business and repair services	435	0.041	0.014	0.021	0.103
Entertainment	435	0.042	0.020	0.024	0.325
Health and Education	435	0.161	0.027	0.084	0.273
Professionals	435	0.042	0.013	0.022	0.117
Public Administration	435	0.053	0.029	0.021	0.243
Share of urban population	435	0.737	0.225	0.189	1.002
Immigrants/natives ratio	435	0.087	0.119	0.004	0.686
African American	435	0.114	0.150	0.001	0.921
Hispanic	435	0.065	0.110	0.003	0.717

*Notes:* The table reports summary statistics for all variables included in the main specification of our analysis. All variables are defined at the congressional district level and are extracted from the 1980 Census of population, unless otherwise specified. *Vote* is coded as 1 if the representative voted in favor of IRCA and 0 otherwise. *Illegals' (natives') over-education* is the share of Mexican and Salvadorean workers (native workers) with a level of education higher than the mode of natives' education in their occupation. *High local tax exposure* is a dummy variable that identifies the districts above the 75th percentile of per capita revenues of local governments (from the 1982 Data Base on Historical Finances of Local Governments: "County Area Finances") and with a share of Mexican and Salvadorian immigrants in the total population above the mean. *Median family income* measures the median family income within a district in dollars. *Age* is the age of the representative. *Gender* is coded as 1 for female representatives, 0 otherwise. *Democrat* is coded as 1 if the representative belongs to the Democratic Party. *SkillRatio* measures the percentage of the population over 25 with at least a bachelor degree. *Unemployment* is the share of unemployed individuals in the total labor force. The following variables report the share of total workers employed in each sector, out of total employment in the district. *Share of urban population* is a measure of the share of population living in urban areas. *Immigrants/natives* is the ratio of foreign-born individuals to natives in the working-age (16-65) population. *African - American* is the share of African-American individuals in the total population. *Hispanic* is the share of Hispanic individuals in the total population.

**Table 2 - Basic Specification**

	(1)	(2)	(3)	(4)
Illegals' over-education	0.529*** (0.205)	0.403** (0.175)	0.341* (0.178)	0.377** (0.185)
High local tax exposure	-0.126 (0.117)	-0.191* (0.106)	-0.190* (0.108)	-0.289** (0.115)
Log median family income	-0.184 (0.157)	0.086 (0.150)	-0.651** (0.314)	-0.964** (0.398)
Democrat		0.364*** (0.038)	0.377*** (0.045)	0.386*** (0.048)
Age		-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)
Sex		-0.040 (0.118)	-0.014 (0.120)	0.015 (0.123)
Natives' over-education			-1.002 (1.476)	-0.475 (1.635)
African American			-0.665** (0.291)	-0.756** (0.341)
Hispanic			-0.758* (0.409)	-0.688 (0.438)
Share of urban population			0.445** (0.214)	0.743** (0.322)
Immigrants/natives ratio			0.209 (0.403)	-0.005 (0.457)
Skill ratio			1.207* (0.663)	2.278* (1.323)
Unemployment			0.328 (2.137)	-0.017 (2.192)
State dummies	Yes	Yes	Yes	Yes
Sector composition	No	No	No	Yes
N	339	332	331	331

*Notes:* The table reports mean marginal effects from a logit model for the probability of voting in favor of IRCA. Standard errors are reported in parentheses. See notes in Table 1 for the definition of the variables.

\*\*\*Significant at 5%, \*\*significant at 5%, \* significant at 10%.

**Table 3 - Alternative definitions of key regressors**

	(1)	(2)	(3)	(4)	(5)
Illegals' over-education	0.377** (0.185)			0.381** (0.186)	0.389** (0.184)
Illegals' over-education (above the mode)		0.236* (0.142)			
Illegals' over-education (1sd above the median)			0.289* (0.171)		
High local tax exposure	-0.289** (0.115)	-0.284** (0.115)	-0.286** (0.115)		-0.298** (0.116)
Alternative high local tax exposure				-0.221** (0.113)	
Log median family income	-0.964** (0.398)	-1.013** (0.396)	-0.996** (0.399)	-0.943** (0.397)	
Log mean family income					-0.847** (0.418)
State dummies	Yes	Yes	Yes	Yes	Yes
Sector composition	Yes	Yes	Yes	Yes	Yes
Natives' over-education	Yes	Yes	Yes	Yes	Yes
Representative characteristics	Yes	Yes	Yes	Yes	Yes
Economic, demographic and ethnic characteristics	Yes	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes	Yes
Sector composition	Yes	Yes	Yes	Yes	Yes
N	331	331	331	331	331

*Notes:* The table reports mean marginal effects from a logit model for the probability of voting in favor of IRCA. Standard errors are reported in parentheses. See notes in Table 1 for the definition of main variables. *Illegals' over-education (above the mode)* and *(1 sd above the median)* is, respectively, the share of Mexican and Salvadorean workers with a level of education higher than the mode or the median + 1sd of natives' education in their occupation. *Alternative high local tax exposure* is a dummy variable that identifies the districts above the 75th percentile of the distribution of per capita revenues of local governments and above the 75th percentile of the distribution of the share of Mexican and Salvadorian immigrants in the total population. *Log mean family income* measures the logarithm of mean family income within a district in dollars.

\*\*\*Significant at 5%, \*\*significant at 5%, \* significant at 10%.

**Table 4 - Alternative control variables**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Illegals' over-education	0.319*	0.343*	0.376**	0.384**	0.360*	0.387**	0.354*
	(0.179)	(0.179)	(0.185)	(0.184)	(0.187)	(0.186)	(0.195)
Local tax exposure	-0.351***	-0.298**	-0.290**	-0.262**	-0.265**	-0.264**	-0.333***
	(0.118)	(0.118)	(0.114)	(0.115)	(0.113)	(0.118)	(0.115)
Log median family income	-0.951**	-0.844**	-0.967**	-0.581	-1.027**	-0.922**	-0.914**
	(0.388)	(0.393)	(0.398)	(0.395)	(0.399)	(0.401)	(0.424)
Democrat			0.354***	0.366***	0.386***	0.386***	0.412***
			(0.081)	(0.049)	(0.047)	(0.048)	(0.058)
DW Nominate	-0.716***						
	(0.078)						
ADA score		0.008***					
		(0.001)					
Share of democratic votes			0.089				
			(0.175)				
Skill ratio	2.314*	1.686	2.355*			2.395*	2.352
	(1.306)	(1.296)	(1.333)			(1.324)	(1.483)
Alternative Skill ratio				-0.253			
				(0.838)			
Occupational skill ratio					3.118*		
					(1.615)		
Immigrants/natives ratio	0.110	0.170	-0.007	0.053	-0.063		0.125
	(0.454)	(0.476)	(0.460)	(0.465)	(0.450)		(0.466)
Log natives						-0.438	
						(0.642)	
Log immigrants						-0.078	
						(0.098)	
PacLabor							0.000
							(0.076)
PacCorporate							0.154**
							(0.068)
State dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector composition	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Natives' over-education	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Representative characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Economic, demographic and ethnic characteristi	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	331	329	331	331	331	331	310

*Notes:* The table reports mean marginal effects from a logit model for the probability of voting in favor of IRCA. Standard errors are reported in parentheses. See notes in Table 1 for the definition of main variables. In columns (1) and (2) we use alternative measures of the ideological orientation of the representative and replace *Democrat* with *DW - nominate score*, which is the normalized DW nominate score (column (1)) and with the *ADA score* (column (2)). In column (3) we control additionally for the *share of democratic votes* in the last congressional election. In columns (4) and (5) we use alternative measures of a district's skill ratio and replace *skill ratio* with *Alternative skill ratio*, the ratio of high school graduates and college graduates to high school dropouts (column 4) and with *Occupational skill ratio*, the ratio of individuals employed in high versus low skilled occupations (column 5). In column (6) we replace the immigrants/natives ratio in the district's working age population with *Log natives* and *Log immigrants*, the logarithm of the number of native and immigrant residents in the same age range. In column (7), we control for *PACLabor* and *PACCorporate* which are measures of the intensity of the lobbying activity and take a value of one if the labor/corporate contributions that the representative received are at or above the eightieth percentile of all labor/corporate contributions in that year, and zero otherwise.

\*\*\*Significant at 5%, \*\*significant at 5%, \* significant at 10%.

**Table 5 - Alternative estimation techniques**

	Probit	LPM	Sample selection model	
			Main	Selection
Illegals' over-education	0.379** (0.187)	0.322** (0.137)	0.337** (0.162)	-5.804*** (2.102)
Local tax exposure	-0.272** (0.110)	-0.251* (0.144)	-0.221** (0.097)	-10.776 (10.690)
Log median family income	-0.914** (0.402)	-0.783* (0.413)	-0.761** (0.344)	-13.604** (5.385)
Democrat	0.379*** (0.048)	0.383*** (0.059)	0.332*** (0.043)	-0.294 (0.690)
Age	-0.002 (0.002)	-0.002 (0.003)	-0.003 (0.002)	-0.011 (0.027)
Sex	0.007 (0.127)	-0.012 (0.115)	0.018 (0.114)	1.923 (1.379)
Natives' over-education	-0.793 (1.607)	-0.044 (1.794)	-0.649 (1.409)	71.661** (29.772)
African American	-0.786** (0.339)	-0.578 (0.387)	-0.646** (0.294)	6.407 (4.105)
Hispanic	-0.776* (0.420)	-0.639 (0.546)	-0.565 (0.358)	13.263 (11.355)
Urban	0.750** (0.323)	0.633** (0.316)	0.561** (0.276)	6.470* (3.555)
Share of Immigrants/Natives, age 16-65	0.086 (0.462)	0.137 (0.443)	0.086 (0.390)	-12.245 (8.526)
Skill ratio	2.022 (1.339)	1.792 (1.256)	1.537 (1.131)	29.854* (17.174)
Unemployment	0.227 (2.208)	0.723 (2.243)	-0.547 (1.868)	-61.830* (34.345)
Inverse Mills' Ratio			0.354** (0.150)	
Participation				39.298*** (10.913)
State dummies	Yes	Yes	Yes	Yes
Sector composition	Yes	Yes	Yes	Yes
N	331	382	417	417

*Notes:* The table reports results from three different econometric models for the probability of voting in favor of IRCA. Column (1) reports mean marginal effects from a probit model. Column (2) shows results from a linear probability model. Column (3) displays the results from the two-stage estimation of a Heckmann sample selection model, and column (4) reports the results of the corresponding selection equation. *Participation in roll call votes* measures the share of roll call votes the representative has participated into, except for the vote on IRCA, during her term in office in the 99th Congress.

\*\*\*Significant at 5%, \*\*significant at 5%, \* significant at 10%.

Figure 3 - Florida's 99th Congress Congressional districts and IRCA vote

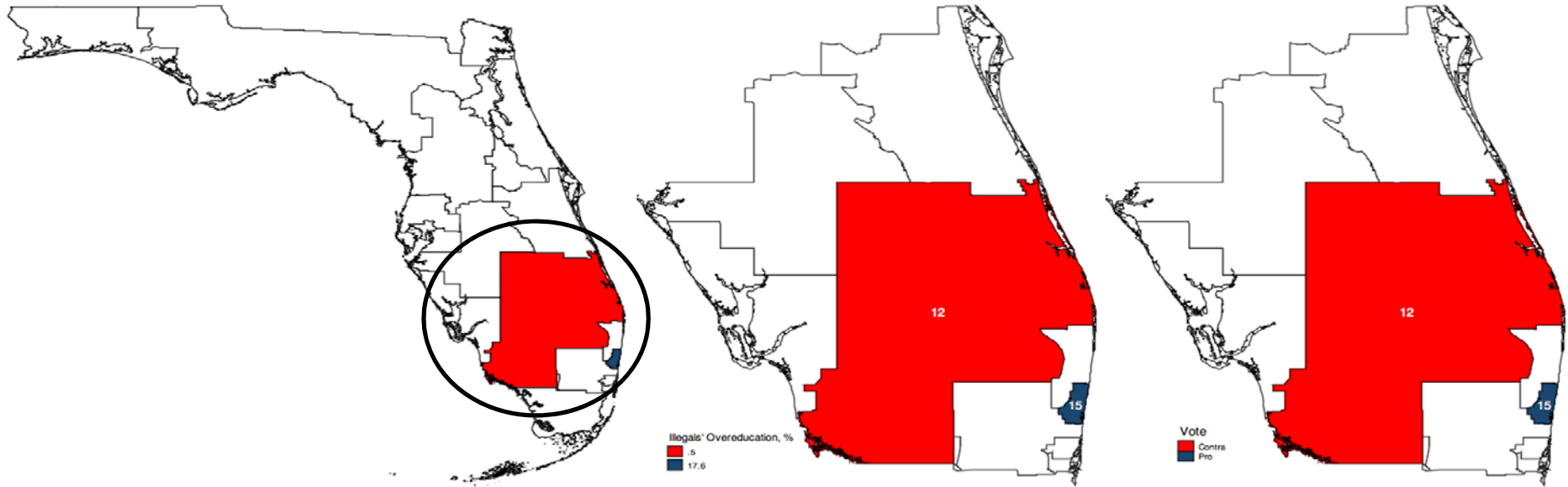




Figure 4 - California's 99th Congress Congressional districts and IRCA vote

